

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A stereomicroscope, comprising:
 - a first beam path and a second beam path, **wherein the first and second beam paths are geometrically superimposable with respective third and fourth beam paths;**
 - a beam splitter disposed in the first and second beam paths, ~~wherein the two beam paths are geometrically superimposable with respective third and fourth beam paths;~~
 - and
 - a single, non-reflective, rotating shutter, wherein said shutter comprises at least one aperture diaphragm for alternately making ~~a given~~ **the** first and second beam ~~path paths~~
2. (Original) The stereomicroscope according to claim 1, wherein the non-reflective, rotating shutter has a plurality of opaque and transmissive regions, wherein a rotation speed of the shutter is reduceable.
3. (Original) The stereomicroscope according to claim 1, further comprising:
 - a first deflecting mirror disposed in the first beam path; and
 - a second deflecting mirror disposed in the second beam path, wherein
 - the first and second beam paths are superimposable at a location proximate to a position of the beam splitter.
4. (Original) The stereomicroscope according to claim 1, further comprising:
 - an image recording device disposed in the third beam path; and
 - a shutter motor to drive said rotating shutter.
5. (Original) The stereomicroscope according to claim 4, wherein the shutter motor is driven in synchronization with a reading of the image recording device.

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Currently Amended) A stereomicroscope, comprising:

a first beam path and a second beam path, wherein the two beam paths are geometrically superimposable with respective third and fourth beam paths;

a first beam splitter disposed in the first and second beam paths, ~~wherein the two beam paths are geometrically superimposable with respective third and fourth beam paths;~~

a rotating shutter, wherein said shutter comprises at least one aperture diaphragm for alternately making ~~a given~~ the first and second beam ~~path~~ paths passable by light or blocking said given first and second beam ~~path~~ paths in a light-tight manner; and
a display to provide image information to the first and second beam paths.

12. (Original) The stereomicroscope according to claim 11, further comprising:

left and right eyepieces;

a second beam splitter disposed in the first beam path; and

a third beam splitter disposed in the second beam path,

wherein the image information from the display is viewed by an observer through the eyepieces.

13. (Withdrawn) The stereomicroscope according to claim 12, wherein the image information from the display is provided to the observer in left and right frames in a time

sequence to provide a stereoscopic image.

14. (Original) The stereomicroscope according to claim 12, further comprising:

a first prism disposed in the first beam path; and

a second prism in the second beam path; wherein the prisms guide the image information into respective eyepieces.

15. (Withdrawn) The stereomicroscope according to claim 14, wherein the prisms are each 30 degree prisms.

16. (Withdrawn) The stereomicroscope according to claim 11, wherein the shutter is one half transmissive and the other half black and opaque.

17. (Withdrawn) The stereomicroscope according to claim 11, wherein the first beam splitter is a pupil splitter having two deflective mirrors to deflect one half of the image information along the first beam path and the other half of the image information along the second beam path.

18. (Currently Amended) A stereomicroscope, comprising:

a first beam path and a second beam path, **wherein the first and second beam paths are geometrically superimposable with respective third and fourth beam paths;**

a beam splitter disposed in the first and second beam paths, ~~wherein the two beam paths are geometrically superimposable with respective third and fourth beam paths;~~
and

a non-reflective, rotating shutter, wherein said shutter comprises at least one aperture diaphragm for alternately making ~~a given~~ **the** first and second beam ~~path~~ **paths** passable by light or blocking said given first and second beam ~~path~~ **paths** in a light-tight manner; wherein

at least a portion of the third and fourth beam paths are located in ~~[[a]]~~ **the** stereomicroscope.

19. (Previously Presented) The stereomicroscope according to claim 18; wherein the non-reflective, rotating shutter has a plurality of opaque and transmissive regions, and wherein a rotation speed of the shutter is reduceable.

20. (Previously Presented) The stereomicroscope according to claim 18, further comprising:

- a first deflecting mirror disposed in the first beam path; and
- a second deflecting mirror disposed in the second beam path,

wherein the first and second beam paths are superimposable at a location proximate to a position of the beam splitter.

21. (Previously Presented) The stereomicroscope according to claim 18, further comprising:

- an image recording device disposed in the third beam path; and
- a shutter motor to drive said rotating shutter.

22. (Previously Presented) The stereomicroscope according to claim 21, wherein the shutter motor is driven in synchronization with a reading of the image recording device.

23. (Currently Amended) A stereomicroscope, comprising:

- a first beam path and a second beam path, **wherein the first and second beam paths are geometrically superimposable with respective third and fourth beam paths;**

- a first beam splitter disposed in the first and second beam paths, ~~wherein the two beam paths are geometrically superimposable with respective third and fourth beam paths;~~

- a rotating shutter, wherein said shutter comprises at least one aperture diaphragm for alternately making ~~a given~~ **the** first and second beam ~~path~~ **paths** passable by light or blocking said given first and second beam ~~path~~ **paths** in a light-tight manner; and

- a display to provide image information to the first and second beam paths; wherein at least a portion of the third and fourth beam paths are located in ~~[[a]]~~ **the** stereomicroscope.

24. (Previously Presented) The stereomicroscope according to claim 23, further comprising:

left and right eyepieces;

a second beam splitter disposed in the first beam path; and

a third beam splitter disposed in the second beam path,

wherein the image information from the display is viewed by an observer through the eyepieces.

25. (Previously Presented) The stereomicroscope according to claim 24, further comprising:

a first prism disposed in the first beam path; and

a second prism in the second beam path; wherein the prisms guide the image information into respective eyepieces.

26. (Currently Amended) A stereomicroscope, comprising:

a first beam path and a second beam path, **wherein the first and second beam paths are geometrically superimposable with respective third and fourth beam paths;**

a beam splitter disposed in the first and second beam paths, ~~wherein the two beam paths are geometrically superimposable with respective third and fourth beam paths;~~
and

a single, non-reflective, rotating shutter, wherein said shutter comprises at least one aperture diaphragm for alternately making ~~a given the~~ **the** first and second beam **path paths** passable by light or blocking said given first and second beam **path paths** in a light-tight manner; wherein

an image generated by a display device is conveyed along the first and second beam paths and passes the single, non-reflective rotating shutter before being superimposed on another beam path.

27. (Previously Presented) The stereomicroscope according to claim 26, wherein the image generated by a display device is conveyed along the third and fourth beam paths after being conveyed along the first and second beam paths, respectively.

28. (Previously Presented) The stereomicroscope according to claim 27, wherein the third and fourth beam paths pass through a first and second eyepiece, respectively.

29. (Previously Presented) The stereomicroscope according to claim 26, wherein the non-reflective, rotating shutter has a plurality of opaque and transmissive regions, and wherein a rotation speed of the shutter is reduceable.

30. (Previously Presented) The stereomicroscope according to claim 26, further comprising:
a first deflecting mirror disposed in the first beam path; and
a second deflecting mirror disposed in the second beam path,
wherein the first and second beam paths are superimposable at a location proximate to a position of the beam splitter.

31. (Previously Presented) The stereomicroscope according to claim 27, further comprising:
an image recording device disposed in the third beam path; and
a shutter motor to drive said rotating shutter.

32. (Previously Presented) The stereomicroscope according to claim 31, wherein the shutter motor is driven in synchronization with a reading of the image recording device.

33. (Previously Presented) The stereomicroscope according to claim 11, wherein:
an image generated by the display is conveyed along the first and second beam paths and passes the rotating shutter before being superimposed onto another beam path.

34. (Previously Presented) The stereomicroscope according to claim 33, wherein the image generated by the display is conveyed along the third and fourth beam paths after being conveyed along the first and second beam paths, respectively.

35. (Previously Presented) The stereomicroscope according to claim 34, wherein the third and fourth beam paths pass through a first and second eyepiece, respectively.

36. (Previously Presented) The stereomicroscope according to claim 33, further comprising:

- left and right eyepieces;

- a second beam splitter disposed in the first beam path; and

- a third beam splitter disposed in the second beam path,

wherein the image information from the display is viewed by an observer through the eyepieces.

37. (Previously Presented) The stereomicroscope according to claim 36, further comprising:

- a first prism disposed in the first beam path; and

- a second prism in the second beam path; wherein the prisms guide the image information into respective eyepieces.

38. (New) The stereomicroscope according to claim 1, further comprising:

- a first eye piece and a second eye piece; and

- a main objective, wherein the third beam path and the fourth beam path pass through the main objective; wherein

- the beam splitter disposed in the first beam path superimposes the first beam path onto the third beam path to obtain a first combined beam path;

- the beam splitter disposed in the second beam path superimposes the second beam path onto the fourth beam path to obtain a second combined beam path;

- the first combined beam path is directed through the first eye piece; and

the second combined beam path is directed through the second eye piece.

39. (New) The stereomicroscope according to claim 38, wherein:

the first beam path and the second beam path comprise an artificially generated light image, and wherein the third beam path and the fourth beam path comprise naturally generated light images.

40. (New) The stereomicroscope according to claim 11, further comprising:

a first eye piece and a second eye piece; and

a main objective, wherein the third beam path and the fourth beam path pass through the main objective; wherein

a second beam splitter disposed in the first beam path superimposes the first beam path onto the third beam path to obtain a first combined beam path;

a third beam splitter disposed in the second beam path superimposes the second beam path onto the fourth beam path to obtain a second combined beam path;

the first combined beam path is directed through the first eye piece; and

the second combined beam path is directed through the second eye piece.

41. (New) The stereomicroscope according to claim 18, further comprising:

a first eye piece and a second eye piece; and

a main objective, wherein the third beam path and the fourth beam path pass through the main objective; wherein

the beam splitter disposed in the first beam path superimposes the first beam path onto the third beam path to obtain a first combined beam path;

the beam splitter disposed in the second beam path superimposes the second beam path onto the fourth beam path to obtain a second combined beam path;

the first combined beam path is directed through the first eye piece; and

the second combined beam path is directed through the second eye piece.

42. (New) The stereomicroscope according to claim 23, further comprising:
a first eye piece and a second eye piece; and
a main objective, wherein the third beam path and the fourth beam path pass through the main objective; wherein
a second beam splitter disposed in the first beam path superimposes the first beam path onto the third beam path to obtain a first combined beam path;
a third beam splitter disposed in the second beam path superimposes the second beam path onto the fourth beam path to obtain a second combined beam path;
the first combined beam path is directed through the first eye piece; and
the second combined beam path is directed through the second eye piece.
43. (New) The stereomicroscope according to claim 26, further comprising:
a first eye piece and a second eye piece; and
a main objective, wherein the third beam path and the fourth beam path pass through the main objective; wherein
the beam splitter disposed in the first beam path superimposes the first beam path onto the third beam path to obtain a first combined beam path;
the beam splitter disposed in the second beam path superimposes the second beam path onto the fourth beam path to obtain a second combined beam path;
the first combined beam path is directed through the first eye piece; and
the second combined beam path is directed through the second eye piece.